

THE CLAIMS

What is Claimed Is:

- 5 1. A method of extraction of olive leaves, comprising:
- a) treating the olive leaves to inactivate enzymes in the olive leaves;
 - b) continuously extracting the treated olive leaves with a non-aqueous solvent, filtering and concentrating to form a first paste;
 - c) removing the non-aqueous solvent;
 - 10 d) treating in a second solvent treatment step to form a final extract, wherein said final extract contains about 6-10% oleuropein.
2. The method according to claim 1, wherein the second solvent treatment step comprises suspending the first paste in water, boiling, filtering, and re-concentrating to form a
- 15 second paste; and combining the second paste with alcohol and activated food-grade charcoal, boiling, filtering and re-concentrating to form the final extract.
3. The method according to claim 1, wherein the olive leaves are treated by steps comprising:
- 20 a) grinding the olive leaves to a fine powder; and
- b) treating the fine powder to inactivate enzymes in the olive leaves.
4. The method according to claim 3, wherein said treatment comprises mixing the fine powder with an anti-enzymatic compound.
- 25 5. The method according to claim 4, wherein the anti-enzymatic compound is MgSO_4 .
6. The method according to claim 5, wherein the concentration of MgSO_4 is 0.25%.
- 30 7. The method according to claim 1, wherein the non-aqueous solvent is selected from the

group consisting of petroleum ether, benzene, hexane, chloroform, and mixtures thereof.

8. The method according to claim 1, wherein the continuous extraction is performed at 70°C.

5

9. The method according to claim 1, wherein the continuous extraction is performed for 48 to 72 hours and includes maceration of the ground olive leaves.

10

10. The method according to claim 1, wherein the non-aqueous solvent is removed by distillation.

11. The method according to claim 1, wherein one part of the second paste is combined with two parts alcohol and one part activated food-grade charcoal.

15

12. The method according to claim 1, wherein each boiling step is performed for about two hours.

13. A product for application to skin comprising at least about 1/2% of an olive-leaf extract according to claim 1.

20

14. The product according to claim 13, further comprising at least one component selected from the group consisting of: vitamin C, a vitamin E component, and vitamin A.

15. The product according to claim 13, further comprising L-ascorbic acid, a vitamin E component, and vitamin A.

25

16. A product for application to skin, comprising:

- a) at least about 1/2 % of an olive extract;
- b) 5-25% L-ascorbic acid;
- c) 1/2 - 2% vitamin E component; and

30

Ont
A1

d) $\frac{1}{2}$ - 2% vitamin A. X

17. The product according to claim 16, wherein the olive extract is an olive-leaf extract. X

5 18. The product according to claim 16, wherein the olive-leaf extract is the final extract of claim 1. *allowable*

19. The product according to claim 16, further comprising a vehicle selected from the group consisting of distilled water, alcohol, and a surfactant. X

10 20. The product according to claim 16 comprising: *allowable*

- 20b
A3
- 15
- a) 1% of the final olive-leaf extract according to claim 1;
 - b) 15-20% L-ascorbic acid;
 - c) 1-2% vitamin E component; and
 - d) 1% vitamin A.

21. The product according to claim 16, wherein the vitamin E component comprises α -tocopherol.

20 22. The product according to claim 16, wherein the vitamin E component is selected from the group consisting of tocopherols and tocotrienols.

23. The product according to claim 16, wherein the olive extract comprises at least one antioxidant phenolic compound.

25 24. The product according to claim 23, wherein the antioxidant phenolic compound is selected from the group consisting of oleuropein and hydroxytyrosol.

25. The product according to claim 16, further comprising 1-5% zinc sulfate.

~~III~~
26. The product according to claim 16, wherein the pH is about 2.0 to 4.5.

~~IV~~
27. A method of treating skin, comprising applying to the skin a product containing the final extract of claim 1.

~~V~~
28. A method of treating skin, comprising applying to the skin a product formulated according to claim 16.

2025-03-07 15:42:00